DOCUMENT RESUME

ED 085 112 PS 007 025

AUTHOR Wolfgang, Aaron; Potvin, Robert
TITLE Internality as a Determinant of Degree of Classroom Participation and Academic Performance Among Elementary Students.
PUB DATE Aug 73
NOTE 7p.; Paper presented at the Annual Convention of the American Psychological Association (81st, Montreal, Canada, August 27 through 31, 1973)

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *Achievement; *Classroom Participation; *Elementary School Students; Grade 6; Grade 7; Grade 8; *Locus of Control; *Sex Differences
IDENTIFIERS *Rotter Internal External Locus of Control Scale

ABSTRACT

Homeroom teachers selected 120 students from their sixth, seventh, and eighth grade classes for this study. The subjects were categorized by teachers as high and low classroom participators. Rotter's Internal-External Locus of Control Scale was used to measure the extent to which students believed their successes were due to their own personal efforts or outside uncontrollable influences. The results indicate that for females, more internally controlled students were the highest classroom participators and earned higher grades than low participators. In contrast to the females, there were no differences in locus of control between high and low male participators. High participation males did earn higher grades than low. No developmental changes were found in locus of control between grades 6 and 8. (DP)

FILMED FROM BEST AVAILABLE COPY

To be presented at the 81st Annual Convention of the American Psychological Association, Montreal, Canada, Aug. 27-31. (Division 15)

ED 085112

Internality as a determinant of degree of classroom participation and academic performance among elementary students

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Aaron Wolfgang and Robert Potvin
The Ontario Institute for Studies in Education and
University of Toronto

Abstract

Homeroom elementary teachers selected students for this study on the basis of classroom participation (high vs. low). Rotter's Internal-External Locus of Control Scale was used to measure the extent to which students believed their successes were due to their own personal efforts or outside uncontrollable influences.

The overall results suggested that more internally controlled students were the highest classroom participators and earned higher grades than low but only for females. Although internality was similar high participating males earned higher grades than low. No developmental changes were found in locus of control between grades 6 and 8.

PS 007025

Internality as a determinant of degree of classroom participation and academic performance among elementary students

Aaron Wolfgang and Robert Potvin

The Ontario Institute for Studies in Education and,

University of Toronto

The primary aim of the present study was to investigate the relationship between an individual's beliefs in locus of control of reinforcements as measured by Rotter's (1966) Internal-External (I-E) Locus of Control Scale and participation in classroom activities. The I-E scale according to Rotter (1966) measures the degree to which an individual perceives a reward as stemming from his or her own behavior (internally controlled) or by luck, fate or powerful others (externally controlled). I-E has been related to concepts of powerlessness (Seeman, 1967) and competence and autonomy (Lefcourt, 1966).

Past research has shown that individuals who were more internally controlled were more successful in academic achievement (McGhee & Crandall, 1968) made more efforts to improve or master their environmental situation (Rotter, 1966; Seeman, 1967; Strickland, 1972).

Much of the research on locus of control has been with adults. The educational implication was dramatically illustrated in the Coleman Report (1966), based on a nation-wide study, where it was demonstrated that locus of control was a better predictor of school achievement than attitudinal, familial, school, and teacher variables.

There has been relatively few studies that have attempted to relate locus of control to actual ongoing day to day classroom behavior among elementary school children at different grade levels. In one study using college students (Katz, Hersch and Wright, 1971) more internally

PS 007025

oriented students were chosen as high participators in classroom discussion. than those externally oriented. The question in the present study was, would I-E predictions for classroom behavior for college students be generalized in an elementary classroom situation.

It was hypothesized on the basis of the I-E construct (Rotter, 1966) that in a competative classroom situation, students who participated and volunteered most in classroom activities would be significantly more internally controlled than those participating least.

Method

Subjects

Nine homeroom teachers were instructed to select from each of their 6, 7 and 8th grade classes a minimum of 5 high and 5 low participants. As a reliability check, an oral French teacher who taught all grades daily, was also asked to select high and low participants based on the same criteria as for the homeroom teachers. There was 93% agreement and those students who didn't appear on both lists were dropped. Out of a total of 258 students, 120 were selected with 61 high participants and 59 low; 67 were males and 53 females; 40, 44 and 36 were from three classes of grades 6, 7 and 8 respectively. Teachers' criteria for assessing participation were as follows (a) number of times the student raises his or her hand, (b) amount of participation in discussion, (c) number of questions asked relevant to the subject matter, (d) volunteering for special projects and classroom jobs.

The students were from an inner city primary school of the Metro Toronto Separate School system. The students were from low income families with the majority of fathers blue collar workers. Over 95% of the students used English as the primary language and were born in Canada.

Procedure

A questionnaire was administered in a classroom setting which included Rotter's I-E scale. The students filled out the pre-coded questionnaires anonomously which included information on students' grade point average and whether they were high or low participators. All participation was voluntary. The I-E scale consists of 29 items with 6 buffer items so that the maximum external score was 23. An example of an I-E item was 1(a) "In the case of a well prepared student, there is rarely if ever such a thing as an unfair test" vs. (b) "Many times exam questions are so unrelated to coursework that studying is really useless". If the student selected the second item, his response was scored external. Some of the words in the I-E scale were simplified for use with elementary students with the help of three elementary teachers. For a simplified word to be included all three teachers had to agree that the meaning of the word did not change the meaning of the original word. When filling out the I-E scale, students asked very few questions about the meaning of test items.

Results & Discussion

An analysis of mean external scores indicated that there were no differences in locus of control between grade levels or sex ($p > .05$). As predicted, high participants ($\bar{X} = 8.72$) in classroom activities were significant ($F = 4.08$, $df = 1/116$, $p < .025$) more internally controlled than low ($\bar{X} = 9.86$). The interaction between sex and class participation approached significance ($F = 2.88$, $df = 1/116$, $p < .10$). Subsequent analysis with Duncan's test showed that mean differences in locus of control between high and low participating males were slight ($p > .05$). In contrast,

high participating females were significantly ($p < .05$) more internally controlled ($\bar{X} = 8.16$) than low ($\bar{X} = 10.26$).

The results relating to grade levels indicated that developmentally locus of control doesn't change from grade 6 to grade 8. In a previous study (Wolfgang, 1971) using Rotter's I-E scale, it was found that in comparing grades 6, 9 and 12, that grade 9 students were the most externally controlled ($\bar{X} = 11.24$) and grade 12 least ($\bar{X} = 9.50$). Thus, the overall results indicated that grade 9 was a turning point in locus of control but in the external direction. As opposed to elementary school where students are in a relatively protective environmental situation, grade 9 is the beginning of high school where students are expected to assume more responsibility at a time of transition and uncertainty. It is at this time that a student's future vocational goals must be decided, when decisions are made, usually by the parents and teachers whether students will be put in a program designed for university, trade or technical school. It is also a time of onset of puberty and physical change. As a result, students perceive themselves as having less personal control over the direction of their lives than at the elementary grade levels.

That high classroom participators were more internally controlled than low is consistent with past research with college students (Katz, Hersch and Wright, 1971). However, these investigators didn't analyze for sex differences. When the sex variable was accounted for, only female high participators were significantly more internally controlled than low. Also, the average letter grade (B average) for more internally controlled females was higher than those more externally controlled (C average). In fact, none of the more internally oriented females received a grade below C

and the A grade was the most frequent. Thus, the more internally controlled females learned approach behaviors that maximize success by volunteering and participating in classroom activities which as a consequence resulted in rewards by teacher approval and higher grades than the more externally controlled students whose success is based on more random and uncertain events. The finding that more internally controlled students were more successful in academic performance was consistent with past research (McGhee & Crandall, 1968). In contrast to the females, there were no differences in locus of control between high and low male participators. However, the average letter grade for high participators was B- and for low, D. For high participators only one male student failed but for low, 10 students or 28% failed. It seems that male students approach behaviors such as classroom participation influenced teachers grades.

Thus, the results of the present study were consistent with the predictions derived from Rotter's Locus of Control Scale (1966) used primarily with adults regarding classroom participation and school achievement of elementary students but only for females.

PS 00 8025

References

Coleman, J. S., Campbell, E. Q., Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D., & York, R. L. Equality of educational opportunity. (Superintendent of Documents, Catalog No. FS 5.238:38001. Washington, D. C.: Government Printing Office, 1966).

Katz, H. A., Hersch, P. D., & Wright, T. L. Internal vs. external control and two examples of classroom behavior. Paper presented at the Western Psychological Association, San Francisco, 1971.

Lefcourt, H. M. Internal versus external control of reinforcement: a review. Psychological Bulletin, 1966, 65, 206-220.

McGhee, P. E., & Crandall, Virginia. Beliefs in internal-external control of reinforcements and academic performance. Child Development, 1968, 39(1), 91-102.

Rotter, J. B. Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 1966, 80, (1, Whole No. 609).

Seeman, M. Powerlessness and knowledge: A comparative study of alienation and learning. Sociometry, 1967, 105-123.

Strickland, Bonnie. Locus of control and competence in children. Paper presented at the American Psychological Association meetings, 1972.

Wolfgang, A. A comparison of Ontario students, teachers, school administrators and guidance counselors in beliefs of internal-external control and future time perspective. Paper presented at the 13th Annual Conference of the Ontario Educational Research Council, Toronto, December 3, 1971.